



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 02ATEX1315X** Issue: **8**

4 Equipment: **2350A Chromatograph Controller**

5 Applicant: **Emerson Process Management Limited**

6 Address: **Unit 5 Block 2 Dumyat Business Park
Tullibody
Clackmannanshire
FK10 2PB
UK**

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2009

EN 60079-1:2007

EN 13463-1:2009

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2 G

Ex d IIB T6 Gb

(Ta -20°C to +60°C)

Project Number 32490

C Ellaby
Deputy Certification Manager

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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The 2350A Gas chromatograph controller is a microprocessor-based device that provides highly accurate timing, precision calculations, pertinent report regeneration and an interface with other devices. The controller provides both analogue outputs and a direct digital link with output devices. It comprises a two piece metallic enclosure, lid and body. These form a flanged flamepath, which are secured together by fourteen M10 stainless steel hexagonal socket head screws. The lid incorporates a window, which also forms a flanged flamepath, and a keypad. The keypad utilises 'hall effect' sensors therefore no penetration through the enclosure wall is required. The body of the enclosure has cable entries, which are M25, M32 or M50.

Variation 1 (dated 19 April 2004) - This variation introduced the following change:

- i. The following, alternative manufacturing site for the DANLOAD 6000 batch loading controller was introduced:
Daniel Measurement & Control (I) Pvt Ltd, 175/176 Por-Ramangamdi Industrial Estate,
Por-391 243, Vadodara, Gujarat, India

Variation 2 (dated 26 August 2004) - This variation introduced the following change:

- i. A Type 3EZ1 RFI Power Line Filter that is manufactured by Tyco Electronics was allowed to be fitted in the DANLOAD 6000 batch loading controller.

Variation 1 (dated 10 October 2007) - This variation introduced the following change:

- i. The use of alternative cable entry point threadforms was allowed.

Variation 2 (dated 3 July 2008) - This variation introduced the following changes:

- i. The name and address of the applicant was changed from Daniel Europe Ltd, Logie Court, Stirling University Innovation Park, Stirling FK9 4NF, UK.
- ii. The label was amended to recognise that the number of the notified body involved with the quality phase has been changed.

Variation 3 (dated 18 July 2008) - This variation introduced the following changes:

- i. The supplier of the enclosure casting was changed, in addition, minor machining amendments were recognised.
- ii. The cable entry point threadforms were changed to 2-11½" NPSM and 1-11½" NPSM.

Variation 4 - This variation introduced the following changes:

- i. Following appropriate re-assessment to demonstrate compliance with the requirements of the latest standards, the documents previously listed in section 9, EN 50014: 1997 (amendments A1 & A2), EN 50018: 2000 and EN 13463 – 1: 2001, were replaced by those currently listed, the markings in section 12 were updated accordingly and two special conditions for safe use were introduced to comply with the new standards..

Variation 5 - This variation introduced the following changes:

- i. The introduction of a new Special Condition For Safe Use and Condition Of Manufacture to give clarification on the use of appropriate certified right angle cable adaptors with the equipment.

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14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report No.	Comment
0	12 December 2002	R51A8735A	The release of the prime certificate for the DANLOAD 6000 Batch Loading Controller/2350A Chromatograph Controller.
1	19 April 2004	R51V11608A	The introduction of Variation 1; this variation is not applicable to the 2350A Gas chromatograph controller and is only listed to maintain the history of this certificate, refer to re-issue dated 18 January 2005.
2	26 August 2004	R51A12301A	The introduction of Variation 2; this variation is not applicable to the 2350A Gas chromatograph controller and is only listed to maintain the history of this certificate, refer to re-issue dated 18 January 2005
3	18 January 2005	R51V12566A	The prime certificate was re-issued to remove all references to the DANLOAD 6000.
4	10 October 2007	R51A17341A	The introduction of Variation 1.
5	3 July 2008	R51A18574A	This Issue covers the following changes: <ul style="list-style-type: none">All previously issued certification was rationalised into a single certificate, Issue 5, Issues 0 to 4 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format.The introduction of Variation 2.
6	18 July 2008	R51A18578A	The introduction of Variation 3.
7	25 January 2012	R25411A/00	The introduction of Variation 4, an X suffix was added to the certificate number as a consequence of the inclusion of the special conditions for safe use.
8	12 February 2014	R32490A/00	The introduction of Variation 4.

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

15.1 The following have a minimum flamepath length in excess of the minimum required by tables 1 of EN60079-1 and are detailed below:

Flamepath	Length/Gap detailed (mm)
Enclosure body/lid	17.8 /0.1
Enclosure lid/window	12.7/0.1

15.2 The property class of the fourteen, M10, stainless steel, enclosure fasteners shall have minimum yield strength of 240 N/mm².

15.3 Where right angle bend cable adaptors are used they shall be appropriately certified and shall interface with enclosures via appropriate certified barrier glands.

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Sira Certification Service

Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900

Fax: +44 (0) 1244 681330

Email: info@siracertification.com

Web: www.siracertification.com



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16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF CERTIFICATION

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.
- 17.3 Where right angle bend cable adaptors are used they shall be appropriately certified and shall interface with enclosures via appropriate certified barrier glands.

Certificate Annexe

Certificate Number: Sira 02ATEX1315X
Equipment: 2350A Chromatograph Controller
Applicant: Emerson Process Management



Issue 0 to 2 (The drawings associated with these Issues were replaced by those listed in Issue 3)

Issue 3

Drawing No.	Sheet	Sheet	Date	Title
DE-12518	1 of 1	H	Nov 02	Case, ATEX Certification Drawing
DE-12520	1 of 1	G	Nov 02	Cover, ATEX Certification Drawing
DE-20775	1 to 5	C	31 Oct 02	Assembly 2350A Controller
BE-21074	1 of 1	A	11 Nov 02	Unit Label 2350A ATEX
BE-12652-1	1 of 1	D	22 Nov 04	Glass Preset (3/4" Thick)
AE-12659	1 of 1	B	28 Oct 02	Compression Spring
AE-12688	1 of 1	A	Jun 93	Gnd. Lug Assembly

Issue 4

Drawing No.	Sheet	Rev.	Date (Sira stamp)	Description
DE12518	1 of 1	J	08 Oct 07	Case, 2350A ATEX Certification Drawing

Issue 5

Drawing No	Sheet	Rev	Date	Description
BE - 21074	1 of 1	B	08 Apr 08	Unit Label 2350A ATEX

Issue 6

Drawing No	Sheet	Rev	Date (Sira stamp)	Description
DE-12650-1	1 of 1	D	17 Jul 08	Case Casting
DE-12650-2	1 of 2	J	17 Jul 08	Case Machining
DE-12650-2	2 of 2	J	17 Jul 08	Case Machining
DE-12651-1	1 of 1	E	17 Jul 08	Cover Casting
DE-12651-4	1 of 2	K	17 Jul 08	Cover Machining (3/4" Glass)
DE-12651-4	2 of 2	K	17 Jul 08	Cover Machining (3/4" Glass)

Issue 7

Drawing No	Sheets	Rev.	Date(Sira stamp)	Title
DE20775	1 to 6	F	06 Dec 11	Assembly 2350A Controller
BE - 21074	1 of 1	D	06 Dec 11	Unit Label 2350A ATEX
DE-12650-2	1 to 2	K	13 Jan 12	Case Machining

Issue 8 No new documents were introduced.

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